

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 2000317770  
PUBLICATION DATE : 21-11-00

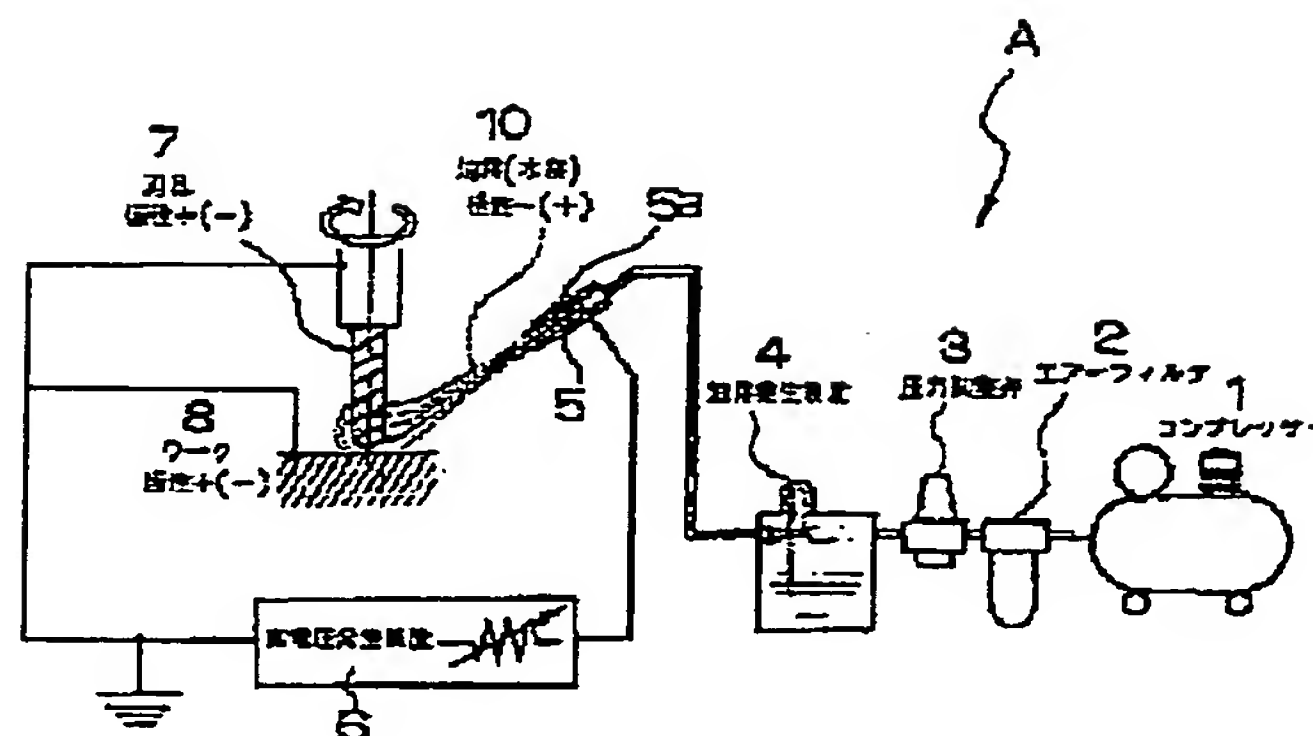
APPLICATION DATE : 10-05-99  
APPLICATION NUMBER : 11128604

APPLICANT : TACO CO LTD;

INVENTOR : FURUKI TOKUO;

INT.CL. : B23Q 11/10

TITLE : CUTTING WORK METHOD AND ITS  
COMBINED WORK DEVICE FOR  
MACHINE TOOL AND THE LIKE



ABSTRACT : PROBLEM TO BE SOLVED: To provide a cutting work method and combined work device for machine tools and the like, capable of enhancing an attraction efficiency to a work by electrostatically charging fine particles of cutting oil and cooling water sprayed over the work or a cutting blade, and minimizing dispersion of oil mist to environment.

SOLUTION: This device is provided with a compressor 1 for generating compressed air, an air filter 2 for purifying compressed air, a pressure adjusting valve 3 for adjusting pressure, an oil mist generating device 4 for generating oil mist, an ejection nozzle 5 for spraying oil mist, and a high voltage generating device 6 for applying high voltage between the ejection nozzle 5 and a work. The ejection nozzle 5 has an electrode 5a assembled at the tip end side to electrically connect a cutting blade 7 and/or the work 8 by means of the high voltage generating device 6. Therefore, upon ejection of oil mist 10 out of the ejection nozzle 5, if it is charged with corona discharge of the high voltage generating device 6, since the cutting blade 7 and the work 8 sprayed with oil mist are charged with polarity opposite to that of oil mist 10, the oil mist can be attracted to the cutting tool 7 and the work 8 without dispersing the oil mist 10, to efficiently lubricate and cool.

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